

M. Hatanaka et al.
U.S. Serial No. 09/471,829
Page 7 of 9

REMARKS

Claims 1 and 10-20 are pending in the application. Claims 12, 13, and 15-18 have been amended to overcome the rejection under 35 USC 112, second paragraph, but have not been amended substantively. The amendments are fully supported by the application as originally filed.

Claims 12, 13, and 15-18 were rejected under 35 USC 112, second paragraph, as being indefinite because of lack of antecedent basis for "said light receiving unit." Claims 12, 13, and 15-18 have been amended to replace "said light receiving unit" with "said plurality of optical fibers," thereby obviating the rejection.

Claims 1 and 19 were rejected under 35 USC 103(a) as being unpatentable over U.S. Patent 4,787,749 to Ban et al. ("Ban") in view of U.S. Patent 4,697,926 to Youngquist et al. ("Youngquist"). Claims 10-18 and 20 were rejected under 35 USC 103(a) as being unpatentable over Ban in view of Youngquist, and further in view of Japanese Publication 7-294220 to Shigeki et al. These rejections are respectfully traversed.

Ban and Youngquist, whether taken individually or in combination, do not teach or suggest a thickness measurement apparatus or method including a shutter for selectively blocking reflected light received by at least one of the optical fibers, as recited in independent claims 1 and 19.

In Ban, a fiber probe 3 receives light reflected from the surface of a sample 41, and this reflected light is received in a spectroscopy unit 1 (see Ban at column 4, lines 56-61; FIG. 3B). However, there is no teaching or suggestion of a **shutter** which selectively blocks the reflected light.

M. Hatanaka et al.
U.S. Serial No. 09/471,829
Page 8 of 9

On page 4 of the Office Action of 12/06/2005, it was admitted that Ban does not teach or suggest "a shutter for selectively blocking the reflected light received by at least one of the optical fibers."

However, the Youngquist reference does not remedy the deficiencies of Ban. Youngquist is directed to a distributed sensor system which "uses a short coherence length light source for accomplishing multiplexing of an array of fiber-optic sensors" (column 4, lines 16-20).

Youngquist was cited for allegedly teaching a "shutter." However, in column 33, line 26+, as cited in the Office Action, Youngquist describes the use of a "shutter" or optical gating as a substitute for electrical gating. In other words, the "shutter" in Youngquist would substitute for the structure and function of the gate 556 (see FIG. 11). In FIG. 11, the gate 556 produces a square wave amplitude modulation of a signal received from an amplifier 553 (see column 32, lines 28-31). Then, the output of the gate 556 is communicated to a spectrum analyzer 560, which incorporates "a band pass filter for selecting and analyzing particular components of signals" (column 32, lines 52-56). In particular, as described in column 33, lines 12-17, "the height of the Bessel function sidebands around the second harmonic of the modulation frequency" are measured from the output of the gate 556.

An optical gate or "shutter" described in Youngquist is designed to replace the structure and/or function of the gate 556.

However, Youngquist does not teach or suggest a thin film thickness measurement apparatus, as recited in claims 1 and 19. Moreover, Youngquist does not relate to the problem of analyzing the thickness of a thin film, and thus one of ordinary skill in the art would not look to Youngquist to address the issue of selectively blocking reflected light for measuring film thickness.

M. Hatanaka et al.
U.S. Serial No. 09/471,829
Page 9 of 9

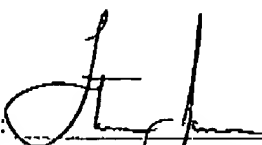
The mere recitation of an optical gate or "shutter" in Youngquist in conjunction with optical fiber does not suggest that Youngquist is in the same field as the Applicants' claimed invention, or that Youngquist addresses the same problem. It is apparent from the above description of Youngquist that the "shutter" disclosed in column 33, line 26 provides a different structure and function than Applicants' claimed shutter, and relates to a different problem (i.e., "selecting and analyzing particular components of signals," such as the height of Bessel function sidebands, as compared to the Applicants' claimed invention, which provides for measuring the thickness of a thin film).

For at least the reasons discussed above, the distributed sensor system of Youngquist cannot be combined with the thickness-measuring apparatus of Ban to somehow produce the Applicants' claimed invention.

It is believed the application is in condition for immediate allowance, which action is earnestly solicited.

Respectfully submitted,

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